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EXAMINER

CHORBAJI, MONZER R

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/871,774	Applicant(s) RICHARDSON ET AL.	
	Examiner MONZER R CHORBAJI	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 15-26, 28-39, 43-55, 57-63 and 65-66 is/are rejected.
- 7) ☒ Claim(s) 12-14, 27, 40-42, 56 and 64 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/23/02 & 10/7/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This general action is in response to the application filing date of 06/01/2001

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the collapsible ducts and the cooling conduit must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. Corrected-drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show perforated tubes and perforations in figures 3 and 4 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

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of the following is required: The specification does not mention the feature "cooling conduit" as mentioned in claims 46, 56-57 and 64-65.

Claim Objections

5. Claim 9 is objected to because of the following informalities: In claim 9, line 9 contains a typographical error "though" instead of "through". Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1, 5-7, 11, 16-18, 21-22, 24-26, 28-30, 32-35, 39 and 43-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Langhart (U.S.P.N. 6,450,188).

With respect to claims 1, 20 and 30, the Langhart reference discloses a method (for example, col.7, lines 60-66) and an apparatus (figure 7) for fumigating produce

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including the following: placing goods on a surface (inherent step in order to fumigate goods), a canopy (must inherently be impermeable to flowable materials in order for successful fumigation to occur), an upper perimeter (301), a lower perimeter (is equivalent to the bottom of the tarp, which is connected to the perimeter hose. The bottom of the tarp is capable of sustaining the lower portion of the canopy in a hanging down position in order to maintain a defined treatment area within the assembly for fumigating goods. This position is sustained in combination with the bottom of the tarp being connected to perimeter hose), the lower perimeter is movable with respect to the upper perimeter (206 and 301), a perimeter support (209), and a gasket (305. Page 10 of the specification teaches that a gasket can be a hollow rubber plastic tubing) that is deformed against the surface to seal the chamber (col.6, lines 64-65. The inherent weight of the water inside the hose causes deformation of the gasket against the floor) such that the gasket is capable of being compressed by the lower perimeter (gasket 305 and bottom of the tarp are connected such that the inherent weight of the tarp is capable of compressing gasket 305 against the floor), lowering the gasket (inherent step in order to fumigate goods), fumigating the produce (inherent step in order to fumigate goods) and venting the chamber (inherent step since fumigants are toxic to human, col.3, lines 45-49).

With respect to claims 5-9, 11, 15-18, 21-26, 28-29, 32-37, 39 and 43-44, the Langhart reference discloses the following: perimeter support includes a cable (213), means for moving the lower perimeter with respect to the upper perimeter (206), a collapsible duct in communication with the chamber (col.9, lines 51-52 and lines 65-67),

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vent fan mountable on and extends through the canopy (col.9, lines 51-52 and lines 65-67), rubber tubing (col.3, lines 35-37), a perforated conduit (col.9, lines 65-67 and col.1, lines 32-35), an intermediate support that includes a wire mesh (frame that makes 301) for supporting both the upper and lower perimeters (302), raising the apparatus to expose the goods (col.7, lines 60-64), injecting methyl bromide (col.1, lines 21-22), circulating the flowable material for a predetermined time within the chamber (col.9, lines 62-63), the lower perimeter is compressed toward the upper perimeter (206) and lowering the lower perimeter away from the upper perimeter to form the chamber (206 and col.7, lines 60-61).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 19, 45, 58-63 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188).

The teachings of the Langhart reference have previously been set forth with regard to claims 1, 5-7, 11, 16-18, 21-22, 24-26, 28-30, 32-35, 39 and 43-44. With respect to claim 58, the Langhart reference discloses a method (for example, col.7, lines 60-66) for fumigating produce including the following: placing goods on a surface (inherent step in order to fumigate goods), a canopy (must inherently be impermeable to flowable materials in order for successful fumigation to occur), an upper perimeter (301), a lower perimeter (is equivalent to the bottom of the tarp, which is connected to the perimeter hose. The bottom of the tarp is capable of sustaining the lower portion of the canopy in a hanging down position in order to maintain a defined treatment area within the assembly for fumigating goods. This position is sustained in combination with the bottom of the tarp being connected to perimeter hose), the lower perimeter is movable with respect to the upper perimeter (206 and 301), a perimeter support (209), and a gasket (305. Page 10 of the specification teaches that a gasket can be a hollow rubber plastic tubing) that is deformable (col.6, lines 64-65, gasket 305 and bottom of

the tarp are connected such that the inherent weight of the tarp is capable of compressing gasket 305 against the floor), lowering the apparatus (inherent step in order to fumigate goods), introducing a first flowable material (fumigant) and venting the first flowable material from the chamber (col.9, lines 51-53) such that a first negative pressure is created (inherent result of removing the fumigant from within the chamber). The Langhart reference goes on to teach that it is known in the art of fumigation (col.6, lines 37-39) to introduce fresh air (equivalent to a second flowable material) into the chamber. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of the Langhart reference to include a fresh air injection step as a standard in the art of fumigation in order to shorten the time period dock personnel have to wait to enter the tent area safely (col.6, lines 39-41).

With respect to claims 19 and 45, the Langhart reference teaches that it is known in the art of fumigation to place flexible vinyl tubes on top of a tarp (col.1, lines 40-45 and figure 4). Further, the Langhart reference teaches a lower perimeter (is equivalent to the unlabeled bottom of the tarp 304), which is connected to the perimeter hose 305, i.e., gasket resulting in the canopy being positioned between the lower perimeter and the gasket. As a result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of the Langhart reference to add flexible vinyl tubes to the lower part of the tarp as is taught to be standard in the art of fumigation for better sealing of the chamber.

With respect to claims 59-63, the Langhart reference teaches the following:
raising the apparatus to expose the goods for removal (col.7, lines 60-64), first flowable

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material is methyl bromide (col.1, lines 21-22), circulating the fumigant after injecting (col.9, lines 62-63), the lower perimeter is compressed toward the upper perimeter (206) and lowering the lower perimeter away from the upper perimeter to form the chamber (206 and col.7, lines 60-61) and second flowable material is supplied to the chamber through a cooling conduit (col.6, lines 37-39).

With respect to claim 66, the Langhart reference teaches that it is known in the art of fumigation to introduce fresh air into the chamber (col.6, lines 37-39) after removing (creating a negative pressure) the fumigant (col.6, lines 33-34). As a result, it would have been to one having ordinary skill in the art at the time the invention was made to modify the method of the Langhart reference to include additional removal and aeration steps in order to shorten the time period dock personnel have to wait to enter the tent area safely (col.6, lines 39-41).

13. Claims 2-4 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188) in view of Hemmelsbach (U.S.P.N. 3,925,942).

The teachings of the Langhart reference have previously been set forth with regard to claims 1, 5-7, 11, 16-18, 21-22, 24-26, 28-30, 32-35, 39 and 43-44; however, with respect to claims 2 and 31, the Langhart reference teaches that the upper perimeter (301) includes an upper truss (truss structure of 301) and the perimeter support (209) includes an upper support chain (213); however, the Langhart reference fails to teach that the lower perimeter includes a lower truss. The Hemmelsbach reference, which is in the art of designing truss structures, discloses the use of a lower truss (16). Thus, it would have been obvious to one having ordinary skill in the art at the

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time the invention was made to modify the apparatus of the Langhart reference by adding a lower truss to the lower perimeter as taught by the Hemmelsbach reference resulting in a considerable savings in materials and assembly time (col.2, lines 65-68).

With respect to claims 3-4, the Langhart reference teaches the upper truss includes a chain guide (203) and a stop block is connected to the lower support chain (206 and 221).

14. Claims 10 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188) in view of Hubert et al (U.S.P.N. 4,956,042).

The teachings of the Langhart reference have previously been set forth with regard to claims 1, 5-7, 11, 16-18, 21-22, 24-26, 28-30, 32-35, 39 and 43-44; however, with respect to claims 10 and 38, the Langhart reference fails to teach that the gasket includes a solvent dispersed synthetic rubber resin adhesive; however, the Hubert reference, which is in the art of treating pipes, teaches the use of Armaflex (i.e., solvent dispersed synthetic rubber resin adhesive). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the gasket of the Langhart reference to include the compound Armaflex as taught by the Hubert reference since such material have the advantage of not becoming brittle (col.5, lines 50-55).

15. Claims 46, 48-49, 51-55, 57 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188) in view of Miyasak (JP 02-072820).

The teachings of the Langhart reference have previously been set forth with regard to claims 1, 5-7, 11, 16-18, 21-22, 24-26, 28-30, 32-35, 39 and 43-44; however,

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with respect to claims 46 and 65, the Langhart reference discloses an apparatus (figure 7) for fumigating goods including the following: a canopy (must inherently be impermeable to flowable materials in order for successful fumigation to occur), an upper perimeter (301), a lower perimeter (is equivalent to the bottom of the tarp, which is connected to the perimeter hose), the lower perimeter is movable with respect to the upper perimeter (206 and 301), a perimeter support (209), and a gasket (305. Page 10 of the specification teaches that a gasket can be a hollow rubber plastic tubing) that is deformable (col.6, lines 64-65, gasket 305 and bottom of the tarp are connected such that the inherent weight of the tarp is capable of compressing gasket 305 against the floor), a fumigation conduit (col.9, lines 65-67 and col.1, lines 32-35), a perforated vent (col.9, lines 51-53) and means for changing a pressure with the chamber (col.9, line 52). The Langhart reference fails to teach supplying chilled air to the chamber. The Miyasak reference, which is in the art of fumigating fruits and vegetables, teaches supplying the chamber with chilled air (purpose, lines 4-5). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of the Langhart reference to include supplying chilled air to the chamber as disclosed by the Miyasak reference in order prevent rapid ripening of the fruits by cooling them (constitution, lines 12-13).

The features of claims 48-49, 51-55 and 57 have previously been addressed above with regard to claims 5-9, 11, 15-18, 21-26, 28-29, 32-37, 39 and 43-44.

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16. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188) in view of Miyasak (JP 02-072820) and further in view of Hemmelsbach (U.S.P.N. 3,925,942).

The teachings of the Langhart reference have previously been set forth with regard to claims 1, 5-7, 11, 16-18, 21-22, 24-26, 28-30, 32-35, 39 and 43-44; however, with respect to claim 47, both the Langhart reference and Miyasak reference fail to teach that the lower perimeter includes a lower truss. The Hemmelsbach reference, which is in the art of designing truss structures, discloses the use of a lower truss (16). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of the Langhart reference by adding a lower truss to the lower perimeter as taught by the Hemmelsbach reference resulting in a considerable savings in materials and assembly time (col.2, lines 65-68).

17. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188) in view of Miyasak (JP 02-072820) and further in view of Hubert et al (U.S.P.N. 4,956,042).

The teachings of the Langhart reference have previously been set forth with regard to claims 1, 5-7, 11, 16-18, 21-22, 24-26, 28-30, 32-35, 39 and 43-44; however, with respect to claim 50, both the Langhart reference and Miyasak reference fail to teach that the gasket includes a solvent dispersed synthetic rubber resin adhesive. The Hubert reference, which is in the art of treating pipes, teaches the use of Armaflex (i.e., solvent dispersed synthetic rubber resin adhesive). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the

gasket of the Langhart reference to include the compound Armaflex as taught by the Hubert reference since such material have the advantage of not becoming brittle (col.5, lines 50-55).

18. Claims 1, 5-9, 11, 15-26, 28-30, 32-37, 39, 43-45, 58-63 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188) in view of Redden (U.S.P.N. 3,682,225).

With respect to claims 1, 20, 30 and 58, the Langhart reference discloses a method (for example, col.7, lines 60-66) and an apparatus (figure 7) for fumigating produce including the following: placing goods on a surface (inherent step in order to fumigate goods), a canopy (must inherently be impermeable to flowable materials in order for successful fumigation to occur), an upper perimeter (301), a lower perimeter (is equivalent to the bottom of the tarp, which is connected to the perimeter hose. The bottom of the tarp is capable of sustaining the lower portion of the canopy in a hanging down position in order to maintain a defined treatment area within the assembly for fumigating goods. This position is sustained in combination with the bottom of the tarp being connected to perimeter hose), the lower perimeter is movable with respect to the upper perimeter (206 and 301), a perimeter support (209), fumigating the produce (inherent step in order to fumigate goods), venting the chamber (inherent step since fumigants are toxic to human, col.3, lines 45-49), lowering the apparatus (inherent step in order to fumigate goods), introducing a first flowable material (fumigant) and venting the first flowable material from the chamber (col.9, lines 51-53) such that a first negative pressure is created (inherent result of removing the fumigant from within the chamber).

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The Langhart reference goes on to teach that it is known in the art of fumigation (col.6, lines 37-39) to introduce fresh air (equivalent to a second flowable material) into the chamber. However, with respect to claims 1, 20, 30 and 58, the Langhart reference fails to teach the use of a gasket. The Redden reference, which is in the art of designing closures for structures, teaches the use of gaskets (col.4, lines 56-57) in combination with doors. Thus, even if the hose of the Langhart reference is not a "gasket" because it is used to seal the device, it would have been obvious to one of ordinary skill in the art to substitute well known and conventional gasket means as evidenced by the Redden reference (col.4, line 57).

With respect to claims 5-9, 11, 15-18, 21-26, 28-29, 32-37, 39 and 43-44, the Langhart reference discloses the following: perimeter support includes a cable (213), means for moving the lower perimeter with respect to the upper perimeter (206), a collapsible duct in communication with the chamber (col.9, lines 51-52 and lines 65-67), vent fan mountable on and extends through the canopy (col.9, lines 51-52 and lines 65-67), rubber tubing (col.3, lines 35-37), a perforated conduit (col.9, lines 65-67 and col.1, lines 32-35), an intermediate support that includes a wire mesh (frame that makes 301) for supporting both the upper and lower perimeters (302), raising the apparatus to expose the goods (col.7, lines 60-64), injecting methyl bromide (col.1, lines 21-22), circulating the flowable material for a predetermined time within the chamber (col.9, lines 62-63), the lower perimeter is compressed toward the upper perimeter (206) and lowering the lower perimeter away from the upper perimeter to form the chamber (206 and col.7, lines 60-61).

With respect to claims 19 and 45, the Langhart reference teaches that it is known in the art of fumigation to place flexible vinyl tubes on top of a tarp (col.1, lines 40-45 and figure 4). Further, the Langhart reference teaches a lower perimeter (is equivalent to the unlabeled bottom of the tarp 304), which is connected to the perimeter hose 305. However, the Langhart reference, fails to teach the use of a gasket. The Redden reference, which is in the art of designing closures for structures, teaches the use of gaskets (col.4, lines 56-57) in combination with doors. Thus, even if the hose of the Langhart reference is not a "gasket" because it is used to seal the device, it would have been obvious to one of ordinary skill in the art to substitute well known and conventional gasket means as evidenced by the Redden reference (col.4, line 57).

With respect to claims 59-63, the Langhart reference teaches the following: raising the apparatus to expose the goods for removal (col.7, lines 60-64), first flowable material is methyl bromide (col.1, lines 21-22), circulating the fumigant after injecting (col.9, lines 62-63), the lower perimeter is compressed toward the upper perimeter (206) and lowering the lower perimeter away from the upper perimeter to form the chamber (206 and col.7, lines 60-61) and second flowable material is supplied to the chamber through a cooling conduit (col.6, lines 37-39).

With respect to claim 66, the Langhart reference teaches that it is known in the art of fumigation to introduce fresh air into the chamber (col.6, lines 37-39) after removing (creating a negative pressure) the fumigant (col.6, lines 33-34). As a result, it would have been to one having ordinary skill in the art at the time the invention was made to modify the method of the Langhart reference to include additional removal and

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aeration steps in order to shorten the time period dock personnel have to wait to enter the tent area safely (col.6, lines 39-41).

19. Claims 2-4 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188) in view of Redden (U.S.P.N. 3,682,225) and further in view of Hemmelsbach (U.S.P.N. 3,925,942).

With respect to claims 2 and 31, the Langhart reference teaches that the upper perimeter (301) includes an upper truss (truss structure of 301) and the perimeter support (209) includes an upper support chain (213); however, the Langhart reference and the Redden reference both fail to teach that the lower perimeter includes a lower truss. The Hemmelsbach reference, which is in the art of designing truss structures, discloses the use of a lower truss (16). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of the Langhart reference by adding a lower truss to the lower perimeter as taught by the Hemmelsbach reference resulting in a considerable savings in materials and assembly time (col.2, lines 65-68).

With respect to claims 3-4, the Langhart reference teaches the upper truss includes a chain guide (203) and a stop block is connected to the lower support chain (206 and 221).

20. Claims 10 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188) in view of Redden (U.S.P.N. 3,682,225) and further in view of Hubert et al (U.S.P.N. 4,956,042).

With respect to claims 10 and 38, the Langhart reference fails to teach the use of a gasket and the Redden reference teaches the use of gaskets in combination with doors but fails to teach that gaskets include a solvent dispersed synthetic rubber resin adhesive. The Hubert reference, which is in the art of treating pipes, teaches the use of Armaflex (i.e., solvent dispersed synthetic rubber resin adhesive). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the gasket of the Redden reference to include the compound Armaflex as taught by the Hubert reference since such material have the advantage of not becoming brittle (col.5, lines 50-55).

21. Claims 46, 48-49, 51-55, 57 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188) in view of Redden (U.S.P.N. 3,682,225) and further in view of Miyasak (JP 02-072820).

With respect to claims 46 and 65, the Langhart reference discloses an apparatus (figure 7) for fumigating goods including the following: a canopy (must inherently be impermeable to flowable materials in order for successful fumigation to occur), an upper perimeter (301), a lower perimeter (is equivalent to the bottom of the tarp, which is connected to the perimeter hose), the lower perimeter is movable with respect to the upper perimeter (206 and 301), a perimeter support (209), a fumigation conduit (col.9, lines 65-67 and col.1, lines 32-35), a perforated vent (col.9, lines 51-53) and means for changing a pressure with the chamber (col.9, line 52). The Langhart reference fails to teach using gaskets and supplying chilled air to the chamber. The Redden reference, which is in the art of designing closures for structures, teaches the use of gaskets (col.4,

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lines 56-57) in combination with doors. Thus, even if the hose of the Langhart reference is not a "gasket" because it is used to seal the device, it would have been obvious to one of ordinary skill in the art to substitute well known and conventional gasket means as evidenced by the Redden reference (col.4, line 57).

Both the Langhart reference and the Redden reference fail to teach supplying chilled air to the chamber. The Miyasak reference, which is in the art of fumigating fruits and vegetables, teaches supplying the chamber with chilled air (purpose, lines 4-5). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of the Langhart reference to include supplying chilled air to the chamber as disclosed by the Miyasak reference in order prevent rapid ripening of the fruits by cooling them (constitution, lines 12-13).

The features of claims 48-49, 51-55 and 57 have previously been addressed above with regard to claims 5-9, 11, 15-18, 21-26, 28-29, 32-37, 39 and 43-44.

22. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Langhart (U.S.P.N. 6,450,188) in view of Redden (U.S.P.N. 3,682,225) and further in view of Miyasak (JP 02-072820) and Hemmelsbach (U.S.P.N. 3,925,942).

With respect to claim 47, the Langhart reference, the Redden reference and the Miyasak reference fail to teach that the lower perimeter includes a lower truss. The Hemmelsbach reference, which is in the art of designing truss structures, discloses the use of a lower truss (16). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of the Langhart reference by adding a lower truss to the lower perimeter as taught by the Hemmelsbach

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26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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